

SECTION 5 – CONTROL OF CONSTRUCTION SITE RUNOFF

40 CFR 122.34 (b)(4) – Develop, implement and enforce a program to reduce pollutants in any stormwater runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Program must include: the development and implementation of (at a minimum) an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, requirements for construction site operators to implement appropriated erosion and sediment control BMPs, requirements for construction site operators to control waste at the construction site, procedures for site plan review which incorporate consideration of potential water quality impacts, procedures for receipt and consideration of information submitted by the public.

5.0 OVERVIEW

Construction site stormwater runoff control is a MCM designed to address the pollution of stormwater runoff from construction sites. During construction activity, vegetation and topsoil can be stripped away, making the area especially vulnerable to erosion and additional sediment in local water. Activities that are performed on construction sites usually disturb a large amount of land and generate large amounts of waste. This has generally been found to lead to high levels of sediment, phosphorus, nitrogen, pesticides, petroleum derivatives, construction chemicals, and solid wastes in receiving streams nationwide.

Several actions must be taken under this MCM to deal with these pollutants. First, construction sites must be required, through ordinances and procedures, to establish erosion and sediment controls (in compliance with the Stormwater Construction general permit). To reduce construction runoff, local governments can develop ordinances for control of erosion and sediment, educate construction site operators about erosion and waste control practices, and inspect sites to ensure the appropriate management practices are followed. A mechanism to enforce compliance must also be established with the regulation or ordinance to ensure that the necessary controls are implemented. Finally, the MS4 must establish procedures for site plan review and receipt and consideration of public input. In review of construction site plans, City staff can look for potential problems, and they can perform inspections to ensure construction site operators are complying with local ordinance provisions.

Table 5.1 BMP and measurable goal summary for Control of Construction Site Runoff.

BMP	MEASURABLE GOAL	PERMIT YEAR				
		1	2	3	4	5
Ordinance	Evaluate existing ordinances and develop draft ordinance; conduct public review; present to Council for adoption, implement ordinance	X				
Site plan review program	Evaluate current review process	X				

	and develop criteria checklists					
	Begin review of submitted plans and begin pre-construction site visits		X			
Site inspection program	Applicable employees to attend training class; develop procedure checklists; inspect construction sites	X				
Reporting hotline	Set up and publicize hotline			X		
Contractor education program	Develop materials; distribute materials; incorporate into pre-construction meetings		X			

5.1 CONSTRUCTION SITE RUNOFF CONTROL ORDINANCE

Description

Sugar Land will evaluate the existing legal authority to enforce the requirements for erosion and sediment controls and proper waste management at construction sites, as well as the sanctions to ensure compliance with the requirements. Sugar Land will develop an ordinance or modify existing ordinances to require erosion and sediment controls, as well as sanctions to ensure compliance.

The ordinance will mandate that construction site operators put up, maintain, and properly dispose of erosion and sediment controls. The ordinance can mandate BMPs for erosion and sediment control and prescribe fines, bonding requirements, and/or permit denials in cases of noncompliance. The ordinance will allow the City to develop, implement, and enforce a program to reduce pollutants in stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Also included are projects less than one acre that are part of a larger common plan of development or sale that discharge to the small MS4. This program will provide for site plan review, receipt and consideration of information submitted by the public, site inspection, and enforcement of control measures. The ordinance may reference the TPDES general permit No. TXR150000 for construction sites in Texas.

Construction site contractors must, at a minimum, implement appropriate erosion and sediment control BMPs and control waste such as discarded building materials, concrete truck washout water, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.

Measurable Goals

- Evaluate existing ordinances that may require modification.
- Develop draft ordinance and/or modification.
- Conduct public review and collect comments on draft ordinance.
- Present ordinance to City Council. Adoption of ordinance by Council.
- Implement ordinance.

Costs

- Labor – 1/3 full-time employee (FTE) in Permit Year 2
- Equipment/Supplies – 1/3 of equipment for FTE

Implementation Schedule

Evaluate existing ordinances and develop draft ordinance and/or modification, Conduct public review and collect comments on draft ordinance, and present ordinance to Council for adoption in Permit Year 1. Implement ordinance upon council adoption.

5.2 SITE PLAN REVIEW PROGRAM

Description

Existing procedures require site plan review and approval by the Development Review Committee (DRC) prior to the initiation of construction activities. City staff will evaluate the site plan review process and develop procedures for a site plan review program that incorporates consideration of potential water quality effects of construction activities. The site plan review will include review of Stormwater Pollution Prevention Plans (SWP3) and will consider the nature of construction, the topography of the site, soil characteristics of the site, and condition of receiving stream for stormwater runoff. Site visits may be conducted to evaluate this information. This evaluation would allow the City/Development Review Committee to identify areas of concern that would potentially have a greater impact on water quality. Forms, checklists, and a standard format for submission of plans will be developed or revised for the review program.

Measurable Goals

- Evaluate current review process for stormwater quality.
- Develop criteria checklists.
- Begin review of submitted plans.
- Pre-construction site visits to a specified percentage of construction projects.

Costs

- Labor – 1/3 full-time employee (FTE) in Permit Year 2
- Equipment/Supplies – 1/3 of equipment for FTE

Implementation Schedule

Evaluate current review process for stormwater quality in Permit Year 1. Develop criteria checklists in Permit Year 1. Review all submitted plans beginning in Permit Year 2. Begin pre-construction site visits in Permit Year 2. Number of sites visited will depend on available departmental resources within Public Works.

5.3 SITE INSPECTION PROGRAM

Description

Sugar Land will develop procedures for a construction site inspection program and enforcement of controls. Stormwater controls will be included in all City construction inspections. Noncompliance will be cause for the City to stop inspections, thereby halting construction until the situation is remedied. Extended noncompliance may also result in a fine. This will communicate to contractors the importance of erosion and sediment controls and waste management. Site inspections will help establish consistency in how requirements are addressed. Site inspectors will need to have training on stormwater quality, which is available from the EPA. Forms, checklists, and protocol for inspection of sites will be developed. Construction site inspections will ensure that the contractor is adhering to the SWP3 that was submitted.

Measurable Goals

- Applicable employees to attend training program for inspections.
- Develop procedure checklists.
- Inspect a specified percentage of construction sites.
- Resolve all noncompliances in a timely manner; number of days to be determined during program development.

Costs

- Labor – 1/3 full-time employee (FTE) in Permit Year 2
- Equipment/Supplies
 - 1/3 of equipment for FTE
 - Training costs

Implementation Schedule

Applicable employees will attend EPA training program for inspections in Permit Year 1. Develop procedure checklists in Permit Year 1. Begin site inspection in Permit Year 1, and increase the number of inspections in Permit Year 2.

5.4 REPORTING HOTLINE

Description

Sugar Land will develop procedures for receipt and consideration of information submitted by the public regarding construction site stormwater controls. This hotline can be combined with the illicit discharge hotline. This environmental hotline will facilitate the ability of the public to provide information that will assist in the detection of problem discharges. Public Works currently responds to citizen requests and performs construction inspections; therefore, little or no additional cost may be associated with this activity. Another consideration may be to have an additional phone line that can be publicized for reporting illicit discharges and dumping. Procedures will need to be established on who will answer the calls, how they will be documented, and who will respond to the calls. Printed educational materials and slides displayed on the municipal cable channel would include the environmental hotline number.

Measurable Goals

- Set up reporting hotline
- Publicize reporting hotline
- Respond to all reports (within a specified number of days)

Costs

- Labor – Existing City staff
- Equipment/Supplies – May or may not need a dedicated phone line

Implementation Schedule

Set up reporting hotline and publicize it in Permit Year 3. Respond to complaints throughout permit term.

5.5 CONTRACTOR EDUCATION PROGRAM

Description

Sugar Land will conduct an outreach program and prepare informational outreach materials for the development community. An informational brochure regarding changes in development requirements will be created. Sugar Land currently conducts one-on-one pre-construction meetings with contractors regarding construction projects in the City. Sugar Land will incorporate stormwater pollution minimization training for site operators and compliance with the stormwater construction general permit into these meetings.

The City will develop or acquire a public education brochure or flyer to inform the public and construction site operators of the requirements for stormwater controls. Sugar Land could adopt NAHB's *Guide for Builders and Developers* or City of Houston and Harris County's *Storm Water Management Handbook for Construction Activities* that provides guidance on compliance with the Construction General Permit. The construction handbook was developed by the City of Houston and Harris County to facilitate local compliance with the Construction General Permit and is widely distributed to contractors in the local area. Contractors would be directed to use the handbook for guidance in complying with the state construction general permit. The City could also distribute or make copies available as contractors apply for construction permits. The City can require contractors to obtain the manual. No cost would be incurred by the City. This is an existing document, which would only need to be adopted.

Sugar Land will promote good housekeeping education for construction site operation. City staff can develop informational materials to educate construction operators about specific erosion and sediment control measures such as land grading, berms, and riprap, as well as general construction site waste management techniques such as trash disposal, recycling, proper material handling, spill prevention, and cleanup measures.

Measurable Goals

- Develop or acquire public education materials.
- Incorporate education into pre-construction meetings
- Distribute education materials to contractors applying for construction permits.

Costs

- Labor – Existing City staff
- Equipment/Supplies – Printed education materials

Implementation Schedule

Develop or acquire public education materials in Permit Year 2. Incorporate education into pre-construction meetings in Permit Year 2. Begin distributing education materials in Permit Year 2.